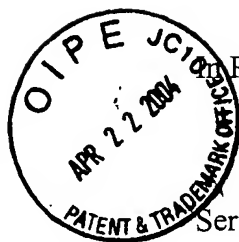


IN THE UNITED STATES PATENT AND TRADEMARK OFFICE



Re the Application of:

DENG et al.

Serial No.: 10/612,779

Filed: July 1, 2003

Atty. File No.: 3161-18-2

For: "PROCESS AND MATERIALS FOR  
PRODUCTION OF GLUCOSAMINE  
AND N-ACETYL GLUCOSAMINE"

INFORMATION  
DISCLOSURE STATEMENT

CERTIFICATE OF MAILING

I HEREBY CERTIFY THAT THIS CORRESPONDENCE IS BEING  
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SHERIDAN ROSS P.C.

BY: *Angela Sebor*

Commissioner for Patents  
P.O. Box 1450  
Alexandria VA 22313-1450

Dear Sir:

Pursuant to Applicants' duty of disclosure under 37 CFR § 1.56 and 37 CFR §§ 1.97-1.98, Applicants hereby provide a copy of each of the documents identified on the enclosed PTO Form 1449. Applicants do not admit that any of such documents, alone or in any combination, are considered to be material to patentability as defined in 37 CFR § 1.56(b). Moreover, the inclusion of these documents is not to be construed as an admission by Applicants that each such document is prior art as to the above-identified patent application.

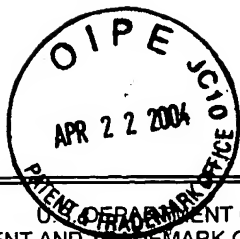
Respectfully submitted,

SHERIDAN ROSS P.C.

By: *Angela Sebor*

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Date: *April 19, 2004*



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	APPLICANT DENG et al.	
	FILING DATE July 1, 2003	GROUP ART

## U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROP.
	1	3,008,874	11/14/61	Feeney et al.	167	55	
	2	3,679,660	7/25/72	Magnus	260	211	
	3	3,683,076	8/8/72	Rovati	424	180	
	4	4,642,340	2/10/87	Senin et al.	536	55.2	
	5	5,246,840	9/21/93	Nilsson	435	101	
	6	5,731,184	3/24/98	Fujishima et al.	435	195	
	7	5,739,015	4/14/98	Srinivasan	435	101	
	8	5,744,325	4/28/98	Fujishima et al.	435	71.2	
	9	5,843,923	12/1/98	Schleck et al.	514	62	
	10	5,876,713	3/2/99	Nishi et al.	424	94.5	
	11	5,988,173	12/7/99	Haynes et al.	435	84	
	12	6,486,307	11/26/02	Gandhi et al.	536	20	
	13	6,531,303	3/11/03	Millis et al.	435	155	
	14	2003/0181419	9/25/03	Hwang et al.	514	62	

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS	TRANSLATION	
							YES	NO
	15	WO 02/43653	6/6/02	PCT				
	16	WO 02/066667	8/29/02	PCT				
	17	EP 0614972A2	9/14/94	EPO				
	18	EP 0732400A2	9/18/96	EPO				
	19	1,056,331	1/25/67	UK				

EXAMINER	DATE CONSIDERED
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	20	JP9234064A2	9/9/97	Japan			Abstract	
	21	2141965	11/27/99	Russia			X	

## OTHER ART (Including Author, Title, Date, Pertinent Pages, etc.)

	22	Araki et al., 1975, <i>Eur. J. Biochem.</i> , <b>55</b> , 71-78
	23	Bachmann 1987, <i>Escherichia coli and Salmonella typhimurium cellular and molecular biology Mutant Derivatives of E. coli</i> , Vol 2: pp 1190-1219
	24	Badet et al., 1987, <i>Biochemistry (Mosc)</i> , <b>26</b> , 1940-1948
	25	Balbas et al., 1996, <i>Gene</i> , <b>172</b> , 65-69
	26	Bearne, 1996, <i>J. Biol. Chem.</i> , <b>271</b> , 3052-3057
	27	Bernheim et al., 1970, <i>J. Bacteriol.</i> , <b>101</b> , 384-391
	28	Blattner et al., 1997, <i>Science</i> , <b>277</b> , 1453-1474
	29	Bouffard et al., 1994, <i>J. Mol. Biol.</i> , <b>244</b> , 269-278
	30	Brown et al., 1989, <i>Biochemical Society Transaction</i> , <b>18</b> , 317-318
	34	Chen et al., 1998, <i>J. Agric. Food Chem.</i> , <b>46</b> , 1971-1974
	32	Chen et al., 1998, <i>J. Agric. Food Chem.</i> , <b>46</b> , 3207-3209
	33	Chen et al., 1987, <i>Molecular General Genetics</i> , <b>210</b> , 331-337
	34	Cochet et al., 1995, <i>Archives of Biochemistry &amp; Biophysics</i> , <b>324</b> , 391-400
	35	Curtis et al., 1975, <i>J. Bacteriol.</i> , <b>122</b> , 1189-1199
	36	Daniels et al., 1993, <i>Mol. Endocrinol.</i> , <b>7</b> , 1041-1048
	37	Denisot et al., 1991, <i>Arch. Biochem. Biophys.</i> , <b>288</b> , 225-230
	38	Domard et al., 1991, <i>Int. J. Biol. Macromol.</i> , <b>13</b> , 105-109
	39	Dutka-Malen et al., 1988, <i>Biochimie</i> , <b>70</b> , 287-290
	40	Elliot et al., 1975, <i>Biochem. Biophys. Res. Commun.</i> , <b>64</b> , 277 - 281
	41	Fawcett et al., 1995, <i>J. Bacteriol.</i> , <b>177</b> , 1742-1750
	42	Fernandez-Herrero et al., 1995, <i>Mol. Microbiol.</i> , <b>17</b> , 1-12
	43	Flores et al., 1996, <i>Nat. Biotechnol.</i> , <b>14</b> , 620-623

EXAMINER	DATE CONSIDERED
----------	-----------------

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	APPLICANT DENG et al.	
	FILING DATE July 1, 2003	GROUP ART

44	Freese et al., 1970, <i>J. Bacteriol.</i> , <b>101</b> , 1046-1062
45	Glaser et al., 1955, <i>J. Biol. Chem.</i> , <b>216</b> , 67-79
46	Golinelli-Pimpaneau et al., 1991, <i>Eur. J. Biochem.</i> , <b>201</b> , 175-182
47	Holmes et al., 1972, <i>J. Bacteriol.</i> , <b>111</b> , 290-291
48	Horlacher et al., 1997, <i>J. Biol. Chem.</i> , <b>272</b> , 13026-13032
49	Isaeva et al., 1987, <i>Izvestiya Akademii Nauk SSR</i> , <b>4</b> , 937-939
50	Jones-Mortimer et al., 1980, <i>J. Gen. Microbiol.</i> , <b>117</b> , 369-376
51	Joyce et al., 1984, <i>J. Bacteriol.</i> , <b>158</b> , 636-643
52	Kashige et al., 1994, <i>Carbohydrate Research</i> , <b>257</b> , 285-291
53	Kauss et al., 1988, <i>Methods Enzymol.</i> , <b>161</b> , 518-523
54	Kimata et al., 1997, <i>Biochemistry (Mosc)</i> , <b>94</b> , 12914-12919
55	Knapp et al., 2002, <i>Tetrahedron Lett.</i> , <b>43</b> , 6075-6078
56	Konecny et al., 1982, in <i>Enzyme Engineering</i> , Vol. 6:pp 91-96, Plenum Press
57	Lengeler, 1980, <i>Mol. Gen. Genet.</i> , <b>179</b> , 49-54
58	Lerliche et al., 1996, <i>J. Am. Chem. Soc.</i> , <b>118</b> , 1797-1798
59	Lerliche et al., 1997, <i>Eur. J. Biochem.</i> , <b>245</b> , 418-422
60	Marie et al., 1992, <i>Mol. Microbiol.</i> , <b>6</b> , 843-851
61	Martinou et al., 1995, <i>Carbohydr. Res.</i> , <b>273</b> , 235-242
62	McKnight et al., 1992, <i>J. Biol. Chem.</i> , <b>267</b> , 25208-25212
63	Mengin-Lecreulx et al., 1996, <i>The Journal of Biological Chemistry</i> , <b>271</b> , 32-39
64	Miclett et al., 2001, <i>The Journal of Biological Chemistry</i> , <b>37</b> , 34840-34846
65	Milewski, 1993, <i>Biochimistry et. Biophys Acta</i> , <b>1161</b> , 279-284
66	Mio et al., 1999, <i>J. Biol. Chem.</i> , <b>274</b> , 424-429
67	Miyazaki et al., 1979, <i>Chem. Pharm. Bull.</i> , <b>27</b> , 532-535
68	Mudri et al., 1992, <i>J. Biol. Chem.</i> , <b>267</b> , 25208-25212
69	Mukhija et al., 1996, <i>The Journal of Biological Chemistry</i> , <b>271</b> , 14819-14824
70	Novikov, 1999, <i>Russian J. Appl. Chem.</i> , <b>72</b> , 156-161
71	Novikov et al., 1997, <i>Russian J. Appl. Chem.</i> , <b>70</b> , 1467-1470

EXAMINER	DATE CONSIDERED
----------	-----------------

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INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)		APPLICANT DENG et al.	
		FILING DATE July 1, 2003	GROUP ART

72	Obmolova et al., 1994, <i>J. Mol. Biol.</i> , <b>242</b> , 703-705
73	Oppon et al., 1998, <i>J. Bacteriol.</i> , <b>180</b> , 3007-3012
74	O'Shannessy et al., 1993, <i>Anal. Biochem.</i> , <b>212</b> , 457-468
75	O'Shea et al., 1993, <i>Anal. Chem.</i> , <b>65</b> , 948-951
76	Oyaizu, 1986, <i>Japanese J. Nutr.</i> , <b>44</b> , 307-315
77	Oyaizu, 1988, <i>Nippon Shikuhin Kogyo Gakkaishi</i> , <b>35</b> , 771-775
78	Oyaizu, 1988, <i>Nippon Shikuhin Kogyo Gakkaishi</i> , <b>35</b> , 846-850
79	Penneff et al., 2001, <i>The Journal of Biological Chemistry</i> , <b>276</b> , 16328-16334
80	Peri et al., 1990, <i>Biochemical and Cell Biology</i> , <b>68</b> , 123-137
81	Plumbridge, 1987, <i>Mol. Gen. Genet.</i> , <b>209</b> , 618-620
82	Plumbridge, 1998, <i>Mol. Microbiol.</i> , <b>27</b> , 369-380
83	Plumbridge, 2001, <i>Nucleic Acids Res.</i> , <b>29</b> , 506-514
84	Plumbridge et al., 1999, <i>J. Bacteriol.</i> , <b>181</b> , 47-54
85	Plumbridge, 1989, <i>Mol. Microbiol.</i> , <b>3</b> , 505-515
86	Plumbridge, 1990, <i>J. Bacteriol.</i> , <b>172</b> , 2728-2735
87	Plumbridge, 1991, <i>Mol. Microbiol.</i> , <b>5</b> , 2053-2062
88	Plumbridge, 1992, <i>J. Gen. Microbiol.</i> , <b>138</b> , 1011-1017
89	Plumbridge et al., 1993, <i>J. Bacteriol.</i> , <b>175</b> , 4951-4956
90	Pompeo et al., 2001, <i>J. Biol. Chem.</i> , <b>276</b> , 3833-3839
91	Pradel et al., 1988, <i>J. Bacteriol.</i> , <b>170</b> , 4916-4923
92	Roseman, 1957, <i>J. Biol. Chem.</i> , <b>226</b> , 115-124
93	Rowley et al., 1991, <i>J. Bacteriol.</i> , <b>173</b> , 968-977
94	Sarvas, 1971, <i>J. Bacteriol.</i> , <b>105</b> , 467-471
95	Sashiwa et al., 2001, <i>Chemistry Letters</i> , 308-309
96	Sashiwa et al., 2001, <i>Japanese Soc. Chitin Chitosan</i> , <b>7</b> , 257-260
97	Schuster et al., 1993, <i>Nature</i> , <b>365</b> , 343-347
98	Shi and Xie 2002 <i>Huaxue Shiki</i> <b>24</b> :93-94
99	Shu 1998, <i>Journal Agricultural of Food Chemistry</i> , <b>46</b> , 1129-1131

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100	Smith et al., 1996, <i>J. Bacteriol.</i> , <b>178</b> , 2320-2327
101	Souza et al., 1997, <i>Archives of Biochemistry &amp; Biophysics</i> , <b>340</b> , 338-346
102	Sumoto et al., 1991, <i>Chem. Pharm. Bull.</i> , <b>39</b> , 792-794
103	Teplyakov et al., 1998, <i>Structure</i> , <b>6</b> , 1047-1055
104	Vogler et al., 1989, <i>J. Bacteriol.</i> , <b>171</b> , 6586-6592
105	Vogler et al., 1989, <i>Mol. Gen. Genet.</i> , <b>219</b> , 97-105
106	Walker et al., 1984, <i>Biochem. J.</i> , <b>224</b> , 799-815
107	Wanner, 1996, in <i>Escherichia coli and Salmonella: Cellular and Molecular Biology</i> , Vol. 1:pp. 1357-1381, ASM Press
108	Wanner, 1990, in <i>The Molecular Basis of Bacterial Metabolism</i> , Vol. 41:pp. 152-163, Springer-Verlag
109	Wanner, 1993, <i>J. Cell. Biochem.</i> , <b>51</b> , 47-54
110	Watanabe et al., 1990, <i>Agric. Biol. Chem.</i> , <b>54</b> , 519-525
111	Watzel et al., 1989, <i>J. Biol. Chem.</i> , <b>264</b> , 8753-8758
112	White, 1968, <i>Biochem. J.</i> , <b>106</b> , 847-858
113	White et al., 1967, <i>Biochem. J.</i> , <b>105</b> , 121-125
114	Wolfe et al., 1956, <i>Arch. Biochem. Biophys.</i> , <b>64</b> , 489-497
115	Wu et al., 1971, <i>J. Bacteriol.</i> , <b>105</b> , 455-466
116	Xin-Yi et al., 2001, <i>Journal of Changde Teachers University (Natural Science Edition)</i> , <b>13</b> , 63-65
117	Yamano et al., 1997, <i>Biosci. Biotechnol. Biochem.</i> , <b>61</b> , 1349-1353
118	Yamano et al., 1996, <i>Biosci. Biotechnol. Biochem.</i> , <b>60</b> , 1320-1323
119	Yamano et al., 1994, <i>Biosci. Biotechnol. Biochem.</i> , <b>58</b> , 193-195
120	Yamano et al., 2000, <i>Mar. Biotechnol.</i> , <b>2</b> , 57-64
121	Zalkin, 1985, <i>Methods of Enzymology</i> , <b>113</b> , 278-281
122	Zhang et al., 2003, <i>J. Cap. Elec. &amp; Microchip Tech</i> pp. 33-37

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